



# Ø-Beat



Vol. 50

December 2000

No. 12



## Rosie/Russ Get Warm Send-Off

We had a nice turn-out at Rosie and Russ' "going away" dinner in Nov. They're not really going away for good, but for a little while at least. About 30 or so people showed up to have dinner with Rosie and Russ at the Country Buffet, where Russ and Rosie received a nice plaque for their contributions to ham radio. Also, we heard from several others like Rosie's daughter Linda Vidmar WAØMMN, Ginger Hipszky NØUOD and Mike Anderson WV7T, who expressed their thoughts in various forms. Everyone was given the opportunity to take a break from their meal and let Rosie and Russ know how much they were appreciated.

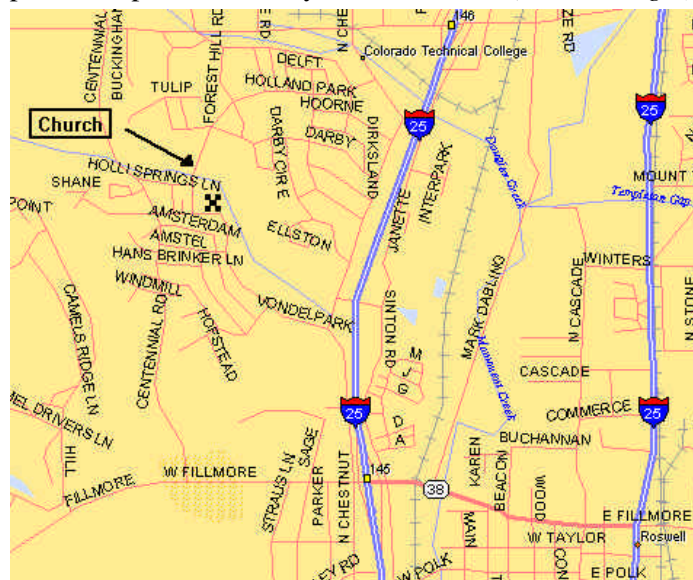


Ron Deutsch NKØP presents a plaque to both Rosie and Russ in appreciation for all they've done for the club and for ham radio. (WV7T photo)

It was nice to see some of Rosie and Russ' family, plus all of the club members that did show up with their families. Rosie and Russ have become motor home owners and will probably do a bit of touring over the next several months.

## Christmas Party!

This year's Christmas Party will be on Dec 15 at 1900, (set-up at 1830) at the Springs City Church, 1250 Vondelpark Dr (off of Chestnut). Turkey and ham will be provided by the PPRAA, and the rest of the food (salads, side dishes, desserts) come from YOU in the form of pot luck. So bring your favorite recipes to share. All members and their families are welcome to attend. Also, please bring your food in a disposable serving tray. Last year we had a couple of items disappear, and we can't be responsible for that. If you do bring in a serving tray, please keep tabs on it so you don't lose it. *(More on Pg 3)*



**Directions to the church:** From I-25 and Fillmore St (Exit 145), go W on Fillmore to the first street (Chestnut St) which runs parallel to the off-ramp at the freeway. Go north about 1/2 mi to Vondelpark Dr. (Champions Golf & Games miniature golf is on the corner). Turn W onto Vondelpark and go 1/2 mi. The church will be in a plain white building on the right. (GPS: 38 deg 53.304 N, 104 deg 50.626 W) Talk-in 146.97 & 146.58.

**Dec Program: NONE - No Meeting - Christmas Party Instead!**



**Meetings** Our monthly meetings are normally held on the 2nd Wednesday of each month at 7 pm at Mount Calvary Lutheran Church, 1318 N. Circle Drive, about 1/2 way between Platte Ave and Constitution Ave on N. Circle. Our Annual meeting is in October.

### Regular License Exam Sessions

PPRAA ARRL test sessions on the 2nd Saturday of even numbered months at 0900 at the Denver Technical College, 3245 International Cr, across from Memorial Park. Contact Erik KGØXE for details. Examinees need to bring (1) \$6.65, preferably a check or money order payable to ARRL/VE; (2) picture ID; (3) the signed original and a copy of your current amateur radio license and CSCs you have (we keep the copies); and (4) a pen, pencil, and calculator if needed. Memory calculators will be checked.

**PPRAA Web Page** See it at <http://www.qsl.net/ppraa/>. Thanks to Rick Brown KØSU, our webmaster and reflector maintainer.

### Get on the PPRAA E-mail

**Reflector** Stay on top of new or short-fused developments. Send e-mail to [majordomo@qth.net](mailto:majordomo@qth.net); within the body type "subscribe ppraanet".

**PPRAA Simplex Net** All amateurs are invited to join us on Thursday evenings at 1900 on 146.58 MHz simplex for our club net. Get the latest club and regional happenings!

## Officers and Directors

*President	Sid White	K4ARM	495-4147	k4arm@arrl.net
*Vice-President	Rick Brown	KØSU	531-9423	k0su@arrl.net
Secretary	Mike Allen	NØMIK	594-4896	mallen517@aol.com
Treasurer	Ron Deutsch	NKØP	593-8352	deutschrd@aol.com
*Board Member	Rhoda Anderson	KB2BZY	634-7168	wv7t@aol.com
Board Member	Jerry VerDuft	ADØA	634-8066	verduftj@earthlink.net
Board Member	Tom McDaniel	NØNTX	570-1465	n0ntx@amsat.org
*Board Member & Ø-Beat Editor	Rob Roller	N7LV	282-0204	n7lv@amsat.org
Past President	Mike Anderson	WV7T	634-7168	wv7t@aol.com

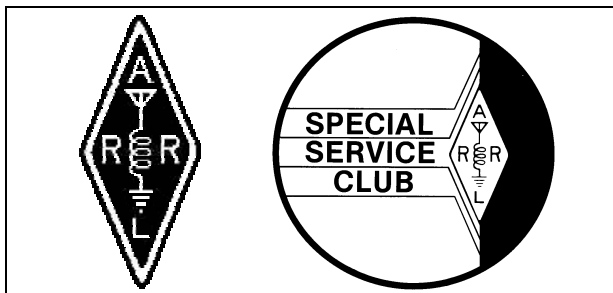
\* Indicates this Director is completing the second year of a two-year term

## Committee Chairs & Other Contacts

Activity	(vacant -- volunteer desperately needed !!!)			
Auditing	(vacant -- volunteer desperately needed !!!)			
Asset	Mike Stansberry	KØTER	636-1290	k0ter@arrl.net
Historian	Jody Borst	KAØROZ	634-3995	kc0nc@aol.com
Interference	Bill Petty	NØNJX	532-1439	william.petty@lsil.com
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Publicity	Rick Brown	KØSU	531-9423	k0su@arrl.net
Public Service	Mike Stansberry	KØTER	636-1290	k0ter@arrl.net
Hamfest	Bob "Rails" Ryals	KIØGF	265-9950	rryals@pcsisys.net
Technical Education	Linda Hedges	KBØRKW	683-7828	kb0rkw@juno.com
VE Testing	Erik Mugele	KGØXE	596-5345	erik@teuton.org
Ø-Beat	Rob Roller	N7LV	282-0204	n7lv@amsat.org
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CCARC Liaison	Moe Pierce	WBØRTF	550-0406	wb0rtf@amsat.org
RACES Officer	John Roberts	KBØVGX	575-8400	kb0vgx@worldnet.att.net

## Upcoming Club Programs

December .....	Christmas Party in lieu of meeting! (See page 5 for details)
January .....	Home Brew Night - Show & tell - Bring in your favorite Y2K project!



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**Articles for the Ø-Beat** Deadline for articles or ads for the January issue is Dec 26. Submit articles by e-mail, US Mail, telephone or in person to the editor. Editor reserves right to correct for readability, grammar, spelling, punctuation and length.

**Nonprofit Organization** The PPRAA is a federal 501(c)(3) nonprofit organization and welcomes all contributions. Your contributions/ donations may be tax-deductible.





## Wes KØHBZ - CO Ham of the Year

Wes Wilson KØHBZ, PPRAA member, former MARC president, PPARES Asst EC, and holder of probably about a dozen other titles, has been named as the ARRL Colorado Section Radio Amateur of the Year. The award was presented to Wes during a surprise ceremony at the November MARC meeting in Woodland Park. It was a surprise to most of the ham community as well, although MARC had gone to extreme lengths to get as many hams to their meeting as possible.



Wes KØHBZ, left, accepts the CO Amateur of the Year award from Tim WBØTUB, center, and Walt WØCP. (K4ARM Photo)

The award was presented to Wes by Tim Armagost WBØTUB, Colorado Section Manager, and Walt Stinson WØCP, Rocky Mountain Division Director. There's no doubt about it. When you look at all that Wes has done over the past year or two to serve the area, it's easy to see why he was selected. It's pretty common to see Wes' trailer/portable ham station at just about every public service event around. Wes is also very active in emergency communications, and has been instrumental in forming a tight liaison with the Teller County Sheriff's Office. Next time you see him, give him a hearty pat on his back! Thank Carol also, KCØDTQ, his wife, for allowing him to get as involved as he does.

## More Christmas Party Details

Each family please bring a covered dish of a favorite food or holiday recipe. Those with call sign suffixes beginning A-L bring side dishes such as salads, veggies, potatoes, etc. Those with call sign suffixes beginning I-P bring bread or rolls and butter or margarine. Those with call sign suffixes beginning Q-Z bring desserts. Those families with two or more hams need bring only one item and, in case there are two or more different call-groups

represented in your family, you choose what you want to bring!

Also, as in years past, we will be collecting non-perishable food items (canned items, dry items such as rice or beans, etc., for donation to a local Care-and-Share-type facility. An extra door prize ticket will be given to each person who brings a donation item.

## Ham Classes Start Next Month

The PPRAA announces the next award winning entry level ham radio classes in Colorado Springs. Registration is open to all! Classes start on January 9th, 2001 and continue until March 15th, 2001, every Tuesday and Thursday evening. Class time starts at 7:00 pm until 9:00 pm at the El Paso County Office of Emergency Management (OEM), 305 South Union Blvd, across the street from Memorial Park. Class materials are free. The book *Now Your Talking*, 4th edition, will be available at the first class for \$19.

All necessary information and materials will be taught so that the applicant can learn and pass the entry level Technician license exam. A license exam will be given at the last class on March 15th. Mr. Frank McNally - KFØWF, ARRL award winning Instructor of the Year, will be the instructor for the class.

If you're planning to attend the class, please pre-register prior to January 3rd, 2001. Contact Frank McNally (KFØWF) or Barb McNally (NØBAM) at 596-8733 or send e-mail to [warm.fuzzy@bigfoot.com](mailto:warm.fuzzy@bigfoot.com). Or contact Linda Hedges (KBØRKW) at 683-7828 or via e-mail to [kb0rkwo@juno.com](mailto:kb0rkwo@juno.com). de Linda KBØRKW

## JOTA 2000



The annual JOTA activity was held this year at the Boy Scout Service Center. The HF bands were really hopping and Scouts were able to hear and make contacts in Europe and all over the US. Shel KFØUR manned the HF station, Tom NØNTX had his satellite station operating and

Mike KBØUWN provided a VHF station to let Scouts talk via the local repeaters. Thanks, Frank KFØWF, for being out there to talk to the Scouts. Robert KCØHIP, a local Scoutmaster, was also there talking with Scouts to let them know about the Ham Radio Merit Badge and other Boy Scout activities involving ham radio. I believe



I have about a page and a half of stations the folks were able to work on HF and they were just using a dipole strung between the flagpole and nearby tree.

One of the highlights for me was working NN4ER, a club station in Daytona Beach, FL via the AO-27 satellite. I have since had an e-mail from the folks manning NN4ER and the Scouts there were just as excited as I was.

While we did not get as many participants as in past years, all of the Scouts and parents attending were impressed with what ham radio can do. This is a worldwide activity and includes Boy Scouts and Girl Scouts in the United States as well as Scouting organizations in many countries.

Dan Scott KBØPPM, who was unable to attend because his son was doing his Eagle project, organized the JOTA activity here. We think he deserves to receive the Tom Sawyer award for bringing all of the rest of us into the activity. I'm sure there are others who were there helping out and they deserve a big "Thank you" as well. *de Rick Brown KØSU*



Robbie Piccione learns operating from Tom NØNTX. Robbie is hard at work on his Radio Merit Badge. (Photo by Rick Brown KØSU)

## AO-40 Launched

Our newest Orbiting Satellite Carrying Amateur Radio (OSCAR) was launched at 0107 UTC on 16 November 2000. AMSAT-OSCAR 40 (called Phase 3D while on the ground) is now undergoing testing after its launch on Ariane 507 (flight 135). The next step will be to slowly move it from its Geosynchronous Transfer Orbit (GTO) into its final 16-hour high elliptical orbit. This process will take approximately 270 days during which the satellite will be available for about 120 days of amateur use at reduced power. After it is in the proper orbit, AO-

40 will be stabilized and the solar panels deployed for full operation.

At the present time, AO-40 is transmitting 400 bps PSK telemetry on 145.900 USB (plus or minus doppler shift). This is very loud here in Colorado Springs and sounds kind of like a buzz saw. For those with satellite tracking programs, current Keplerian elements are available from AMSAT ([www.amsat.org](http://www.amsat.org)), and the AMSAT web site will also have the latest operating and frequency information.

When fully operational, AO-40 will provide reliable long distance communication for up to 10 or 12 hours on a two-day cycle. This will provide an opportunity for us to directly contact most countries from Colorado Springs using small VHF/UHF or microwave antennas. A significant step in amateur satellite communications! *de Tom McDaniel NØNTX*

## Traffic Tutorial (Pt V)

*[This traffic tutorial is provided by Jerry VerDuft ADØA, who is an avid traffic handler. This is part 5 of 6, and will be presented over the coming months as space permits.]*

The newest mode for handling message traffic is **PACKET**. This is an effective method but it is dependent upon someone accessing the local BBS for delivery of traffic, thus delivery is not always as timely as voice or CW nets. Suppose we want to send the following message:

1 R ADØA 8 Colo Springs CO Aug 9

Jeff Taylor

1095 West Palm Ave

Savannah GA 31408

912 897-9163

Happy birthday X See you soon X Love

Dad

The following is how we would send this message after logging onto the BBS. First type:

**ST 31408 @ NTSGA (Enter)**

This command tells the BBS that you want to send a formal message (ST for Send Traffic) in the NTS format to ZIP code 31408 in Georgia. The BBS will respond: SUBJECT (Some BBSs will say "TITLE"

or something similar.) You then type:

**QTC SAVANNAH GA 912/897 (Enter)**

This tells the BBS you have a message for Savannah, Georgia with an area code and telephone prefix. It gives those looking for BBS traffic later a clear idea of whether



the message is in their delivery area. The BBS will respond with:

MESSAGE (or TEXT):

You then **type the message** in the format shown above or on FSD-218, ending with **CTRL -Z**. Most BBSs will then say:

MESSAGE (BBS number) HAS BEEN STORED.

To verify it has been stored, simply type:

**R (BBS number)**

The BBS will then read the message back to you on the screen. You have now entered your message into the **NTS PACKET system**. It will be automatically forwarded, through various digipeaters, to the BBS which services the ZIP code of your message. There it will wait for someone to access the BBS and pick it up for delivery. A quick way to find out if your BBS has any NTS-formatted messages is to type:

**LT**

for (List Traffic). The BBS will then list all "T" messages. This feature is particularly valuable to regular NTS operators who scan BBSs routinely to find traffic they can move. To read a particular message, type:

**R (message number)**

If you want to accept the message for delivery or further relay, print or save it and then type:

**KT (message number)**

for (kill traffic) followed by the BBS message number. The BBS will then delete the message from its memory. There you have it! You're now a full-fledged NTS Packeteer.

## Club Jackets ?

Rob N7LV is now accepting orders for the yellow PPRAA jacket at the next couple of meetings. Call him directly if you can't make the meeting. Approximate cost is \$35 per jacket, payable in advance. Your name and call will be screened on the front, and the club logo on the back. Cutoff for ordering is the December Christmas party (Dec 15). Jackets will probably be ready sometime in January.

## Passing the Time

- **50 Years Ago this Month:** Under unfinished business a name for the club was discussed further. A motion to adopt the name El Paso Radio Club was made by Frank Thornton WØKMS and seconded by Jim Merrill WØANX. Motion carried. Initiation fee for new members was set at \$1.00. Ralph Herrlin and

Hank Bushnell were appointed to draft a constitution for the club.

- **20 Years Ago this Month:** The December meeting was called to order by President Dave Vierling NØDV at Sabin Jr. High. The club thanked Don Lohse and Doug Moloney for a super Christmas party held at the Iron Springs Chateau. Doug Moloney announced the upcoming wheelchair basketball game. The Ham Hawks lost to the Steamrollers greatly.

*de Jody Borst KAØROZ, Historian*

## Membership Report

### Please welcome these New Members

RICHARD CULLEN ..... WØMNX  
DONALD DULEY ..... KCØGBG  
CHARLIE HOPKINS ..... N8OX  
ROBERT ROSIE ..... WA6GSV

### Members who need to see the treasurer

SUNIL BHAVE ..... KCØHHW  
TIMOTHY REHORST ..... KCØHHX  
DELIO VIDAL ..... KCØHHY  
MICHAEL ZIMMER

### Goodbye to the following members

STEPHEN ANDERSON ..... KCØHQH  
DUTCH HARBERT ..... KCØHQI  
ROBERT ISHAM ..... KCØHPY  
JAMES KINNEY  
ROBERT LANZA ..... KCØHPR  
DIANE MARTIN ..... KD5JTA  
ED MEANS ..... WØVO  
ROBERT MIKULAS ..... KCØHQA  
SANJAK NAIK ..... KCØHQJ  
CAROL NELSON ..... KCØHPS  
DAVID NELSON ..... KCØHPT  
CORA NIEMAN ..... KCØHQG  
ILEY PULLEN Jr. .... NØDUI  
MARK RICHARDS ..... KCØHQB  
REBBECA SLOAN ..... KCØHQC  
ROGER SPAULDING ..... KBØPQM  
JONATHAN SPIEKER ..... KCØHPX  
KENNETH VALDEZ ..... KCØHQE  
MICHAEL WEAVER ..... KCØHPU

### Total Number of Members

196

## Going Away for the Holidays?

If so, bring along a notepad along with your radio, and write down a little about your ham activities on your trip. We'd love to hear about what's going on in the ham radio worlds of other neighborhoods! Submit your experiences to the Ø-Beat editor when you return, and we'll publish them in the next issue.





## Public Service & Emergency Communications

The PPRAA is an ARRL Special Services Club, but it is not an emergency services club itself. The PPRAA supports all amateur radio involvement in public service and emergency communications in any way it can, including reporting activities happening in the region. These columns are based on available knowledge, and the opinions expressed are not necessarily the opinions of RACES, ARES, Skywarn or any other organization, or their leadership. Logos used with permission.

### RACES



<http://www.qsl.net/epcraces/>

VHF Net Tuesdays at 1930 on 147.345/448.1 MHz  
CMRG repeater

John Roberts KBØVGX, RACES Officer

Things are a little quiet this time of year. However, the RACES Officer **John Roberts KBØVGX** and **Tony Dal Lago KC4VMB**, the deputy RO, are searching for candidates for the various RACES positions for next year. If you're interested in becoming more involved than the typical RACES member, please contact John or Tony right away. There were some lessons learned during the 11/4 exercise, in which RACES members were dispatched to various fire stations throughout the county to support communications during a simulated winter storm. The fire stations would serve as public shelters. More details will be available when the after-action report is released.

### ARES



<http://www.qsl.net/n7lv/dist14.htm>

VHF Net Tuesdays at 1900 on 146.97 MHz  
PPFMA repeater

Larry Dunn N9HSW, Emergency Coordinator

A few activities are being planned by Mike KBØIAP; more on these as they become available. ARES will have participated in a nationwide National Weather Service event (contest?) by the time you get this. No other significant activities are planned for the coming month. But as always, PPARES should continue to be prepared for winter severe weather, just in case. You should have supplies in your vehicle to include food, water, tire chains, and items to keep you warm if you get stranded. Next month, look for a reprinting of Skee Hipszky's "coffee can survival kit" items. This is a list of items that can fit in a coffee can and remain in your vehicle at all times.



### Rosie's Poem

Thank you for ...  
Teaching me the code and theory  
And when I passed the tests and sent my first wobbly CQ,  
You were there.  
Acquainting me with helping others through ham radio  
And keeping my antennas up and my rigs  
On the air.  
Putting up with me, especially when I show off  
My DX cards, always talking radio and acting silly, too.  
Letting me be an active member of the club,  
For always including me, for respecting me (and teasing me).  
The best hams are You!

*Rosie*

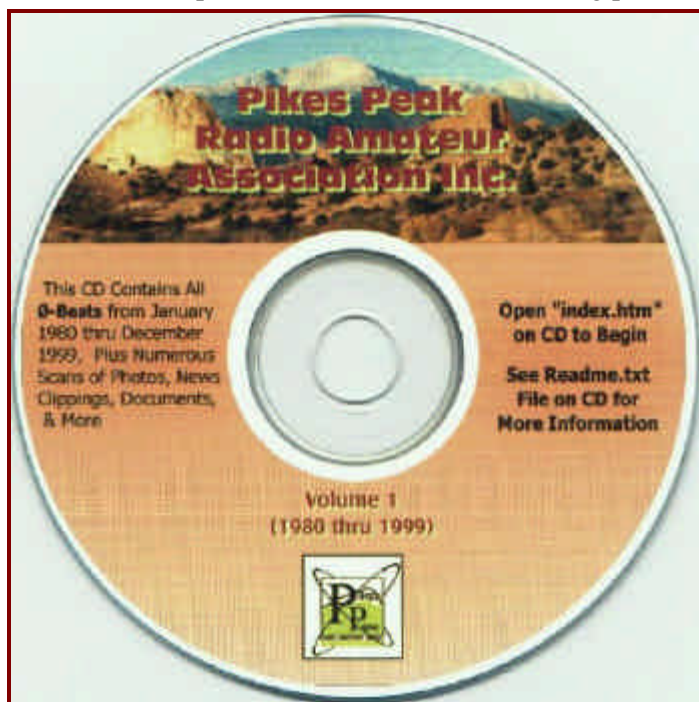
We know that we could never find nicer folks  
Than those we leave behind.

*Russ & Rosie*



## PPRAA CD-ROM Finally Done!

You may remember back in Nov 1999 I mentioned work beginning on a PPRAA CD-ROM, complete with scanned *Ø-Beats* from Jan 1980 to Dec 1999. I'm pleased to announce that the CD-ROM is ready to go, and I'm now accepting orders if you want a copy of that CD. Besides the 240 issues of the *Ø-Beat*, you'll also find numerous photos, newspaper clippings and other historical notes about the club. Jody KAØROZ has assisted by providing me with all the *Ø-Beats* from this period, and Rosie WAØMNL has provided me with some interesting photos



and newspaper clippings. I've scanned them in, page by page. I had also hoped to have a single article summarizing each decade, but that hasn't worked out as intended. There's no index by author or subject, only by year and month. The CD will cost \$10 (prepaid) for members (which covers production, plus a donation to the club), and will be available for non-members at a substantially higher price (like around \$75). The next CD-ROM, Phase II, which will have the *Ø-Beats* prior to 1980, is now being planned. For the next CD I hope to get photos of other items in the historian's possession; Sid K4ARM may be willing to take some of those photos. I'd also like to get a biography from each and every club member, along with a photograph. If you can e-mail me a paragraph or two about yourself, and either scan in a photo, or get the photo to me and I'll scan it in, I'll include that in either this first CD or the next one. *de N7LV*

## Hams Can Help with Christmas Dinners for Needy

In November, Richard Fredricy KBØLWJ and Pat Conner KØTSR organized a first for ham radio's ability to help feed the needy in Colorado Springs at Thanksgiving. They, along with a couple of dozen hams, provided comm between the various serving locations, some of the delivery vehicles, and the Ft Carson kitchen to get the food to the needy. The original plan was to use the CSARA 146.625 repeater, but the traffic ended up on the 147.03 WBØNUW machine on Cheyenne Mtn, which provided excellent coverage for the event. The opportunity again exists to help out again for Christmas dinners. Yes, this would mean giving up some family time, but the rewards are great. Not to fear though, as your whole family can get involved. Or you can adjust your own schedule around your volunteer hours. Volunteers will be given a free dinner as well. If you're interested in helping please contact Richard. Or you may be interested in helping, but not necessarily with amateur radio. If so, there are lots of things that you could help with. Let Richard know what you're interested in, and he'll point you to the right person. You can catch him on the 146.625 CSARA repeater, or contact him via phone or e-mail. (Richard Fredricy, KBØLWJ, 282-2739, e-mail [rfredricy@carriocabling.com](mailto:rfredricy@carriocabling.com))

## Colorado Connection News

I wanted to start out by thanking the editors of the many club newsletters who publish this article. Also we at The Connection would like to express our deepest gratitude to those of you who volunteered as well as donated this past year. Without all of you The Connection could not exist. The Connection is being used quite a bit by hunters staying in contact with home this month. This is a good thing. We at The Connection feel that the added safety of having a reliable source of communication in these remote camps is the kind of thing The Connection does best. Our ability to provide RELIABLE long haul VHF communications to nearly anywhere in the state makes us a valuable asset to all state disaster relief organizations.

**Party!!! Party!!!** Our annual Christmas Party will be held on Thursday Dec 7th at The Country Buffet at Quincy and C-470 at 6:00 pm. Bring the family! There is an OPTIONAL \$5.00 fun gift exchange. If you wish to participate bring a \$5.00 or less gift for the table. A fun game ensues with people trading gifts back and forth for quite a while. The Connection has arranged for a private



room for us. Thanks to Bill KBØNWM. This means that the buffet will be charging you the normal meal price. We have met here before and I can say the food is good and all you can eat.

Keep in mind all are invited to attend our monthly volunteers meeting on the 2nd Tuesday of each month at the RMRM offices located at 3931 Holly St. 1 1/2 blocks South of Smith Road on the west side of the street. Meetings usually start about 5:30 pm and last about 2 hours.

Enjoy this happy holiday season. 73 from all of the hard workers at The Colorado Connection. *de Paul Shackelford WBØQMR 11/15/00*

## RF Safety Program Available

I have version 3.1.2 of the RF Safety Program now available for those who want it. The RF Safety Evaluation per OET 65 became mandatory as of Sep 1, 2000. There is nothing you have to send in to the FCC, just do the evaluation. This is required for both amateur and commercial radio users. The v. 3.1.2 does the calculation and saves it to disk and makes a printout if you like. There is both a Windows and a DOS version in the RFSFX.EXE zipped, self-extracting e-mail attachment file. NO CHARGE!! It's in the public domain. Copy it and give it to others if you like. Send me a message requesting it along with your e-mail address and I will send it as an attachment. The file is about 350k in size. If your email won't handle it, give me a snail mail address and I will send you a floppy with the files already unzipped. 73 *de Fred Pfannenschmid, WØZZS, 813 Kalispel Avenue, Pueblo, CO 81005-1414 w0zzs@juno.com*

## Winter Project (Pt I)

*[Looking for a winter project? With the cold weather upon us, this may be the project for you. Hopefully you can do this before the fox hunting season starts up again. This is a reprint of an article by Dave Kurth NØUVR for building an attenuator that can be used for fox hunting.]*

Radio direction finding or fox hunting has been a part of amateur radio since the first hams started transmitting. Different equipment and radio direction methods have developed over the years. Fox hunting equipment can vary from one using only his handheld transceiver and block with his body, to computer controlled antenna arrays using Doppler shift algorithms. For most people,

though, a beam antenna, an attenuator, and a radio are more than sufficient.

A beam antenna will receive a signal with a higher signal strength when pointed in the direction of the signal source. Most all radios have a signal strength meter that will indicate when the signal is the strongest. So if all one has to do is point the antenna in the direction of the strongest signal, why would one want an attenuator? The reason is most radios' S-meters do not behave in a logarithmic fashion. The meter will usually be full scale for any direction the beam antenna is pointed. This condition makes pointing the beam directly at the signal source difficult. The attenuator solves this problem. It's placed between the antenna and radio, and adjusted so that the receive signal strength can be reduced to where the S-meter sits in the middle of its range. As the beam is rotated back and forth, small changes in signal strength can be easily seen on the S-meter.

Beam antennas are quite easy to obtain. There have been many plans in QST and other magazine showing various three and four element Yagi beam antennas. I've been using the "7dB for 7 Bucks" antenna that was described on page 54 of the April 1993 issue of QST.

Attenuators, though, are a little harder to come by. Hewlett-Packard makes the model 355 attenuator that goes from 0 to 120 dB in 10 dB steps. If bought brand new they are quite expensive (in the hundreds of dollars). They contain precision resistors, have very accurate attenuator values, and work at frequencies up in the gigahertz range. For fox hunting with a radio, 120 dB of attenuation is useless. The amount of signal that leaks through the radio case will be more than what comes through the attenuator. We only need to operate in the VHF range, so we can make an attenuator that is easy to build. We also don't need high precision, just something that gets our S-meter around the mid-scale region.

I've built a simple attenuator that will cover from 0 dB to 65 dB in 5 dB steps using only four switches. To do this, the attenuator has four stages consisting of 5 dB, 10 dB, 20 dB and 30 dB of attenuation.

*[Hang on to this issue. Next month we'll run the rest of the article, with its diagrams and formulas on how to build the attenuator.]*

**Next Month: How it Works**





## Miley's Radio

719 West 7th Street, Florence, CO 81226 (719) 784-3040

Since 1974

<b>AEA MM3A</b> Morse machine, keyer, tutor. \$100	<b>KENWOOD TS140S</b> . \$550
<b>ALINCO</b> DR130T, 2m mobile. \$110	<b>KENWOOD TS440S</b> . \$750
<b>ASTRON</b> RS12A. \$50	<b>KENWOOD TS450S/AT</b> . \$850
<b>ASTRON</b> RS35A, P/S, very little use. \$120	<b>KENWOOD TS440S/AT</b> . \$850
<b>ASTRON</b> RS35M, w/meter. \$120	<b>KENWOOD TS520</b> . \$325
<b>BUTTERNUT HF5-B</b> HF beam 10 12 15 17 & 20m good cond. \$175. One in box, never opened. \$275	<b>KENWOOD TS520SE</b> 160-10m. \$375
<b>BUTTERNUT HF6VX</b> 80-10m vertical, good cond. \$175	<b>KENWOOD TS530SP</b> Digital, WARC, excellent CW/SSB filters. \$550
<b>HEATH HW-101</b> HP23 P/S, new finals and relay driver, completely aligned to factory specs. \$250 firm	<b>KENWOOD TS680S</b> 160-6m. \$650
<b>HEATH SB-200</b> Amp, exc cond, up to factory specs. \$350 firm	<b>KENWOOD TS830S</b> Nice. \$600
<b>HUSTLER 4BTV</b> 40-10m vertical, all tuned. \$70	<b>KENWOOD 2100</b> HF SWR / wattmeter, matches most Kenwood. \$75
<b>ICOM AH3</b> Auto tuner for 725, 726, 737, 707. \$200	<b>KENWOOD TR-9130</b> 2m all mode, TTM, encode box. \$315
<b>ICOM PS-55</b> 20A power supply. \$150	<b>KENWOOD TW-4000A</b> 2/70m dual band mobile, TU4C tone encoder, TTM, voice synth, CAP/MARS, 25W. \$225
<b>ICOM SP3</b> Speaker. \$40	<b>MFJ 269</b> SWR analyzer, 450 MHz, New. \$310
<b>ICOM 211</b> 2m all-mode base unit. \$350	<b>MFJ 462B</b> All-mode multi reader, CW, RTTY, ASCII, AMTOR, will hook to printer. \$90
<b>ICOM 725</b> . 160-10m. \$650	<b>MFJ 784</b> Tunable DSP filter. \$100
<b>ICOM 725-AH3 Combo</b> . \$800	<b>MFJ 817</b> 2/70 SWR/watt meter. \$60
<b>ICOM 730</b> . \$450	<b>MFJ 1278B</b> All-mode packet controller, used. \$150
<b>ICOM 735</b> W/ hand mic, electronic keyer, & mounting bracket. \$625; w/o keyer & mounting bracket. \$600	<b>MFJ 9406X</b> 6mtr SSB, new \$250, used \$175. CW adapter. \$40
<b>ICOM 745</b> With internal PS, loaded with filters and TCXO. \$600	<b>MIRAGE D1010N</b> 440 amp, 10/100w. \$250
<b>ICOM 750A</b> in box, works great. \$700.	<b>MIRAGE A1015G</b> 6m amp, preamp, 10/150w, like new. \$250
<b>ICOM 2000H</b> VHF mobile w/tone. \$120	<b>REALISTIC 394</b> AM, CW, SSB, SW receiver, AC/DC. \$150
<b>KENWOOD AT-230</b> Manual tuner. \$130	<b>SONY ICF5900W</b> AM, FM, SSB, CW, portable SW receiver. \$100
<b>KENWOOD PS 50</b> 20 amp power supply. \$150	<b>YAESU FT101E</b> Xcvr w/ hand mic, good cond, \$325, also B & EE, \$300 ea
<b>KENWOOD SM-220</b> Scope, no pan adapter. \$275	<b>YAESU FT101ZD</b> Digital, great cond. \$450
<b>KENWOOD TM-261A</b> Like new. \$150	<b>YAESU FT102</b> Digital, AM/FM, WARC, excellent cond. \$550
<b>KENWOOD TM733</b> 2/70 mobile, loaded, cross band repeat, dual receive. \$300	<b>YAESU FT109RH</b> 220 MHz HT, 4w, \$150, with tone encoder installed. \$175
<b>KENWOOD TS120S</b> 5-band xcvr. \$325	<b>YAESU FTV707</b> Transverter, 6m module installed, for FT707-901-902. \$200
	<b>YAESU FT757GX</b> Completely aligned, excellent cond. \$575

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November 2000

## General Meeting Minutes

The November 8<sup>th</sup> 2000 meeting of the Pikes Peak Radio Amateur Association was called to order by Sid White, K4ARM at 7 PM. There were 48 members present. Sid asked for corrections or omissions to the October club meeting minutes printed in the *Ø-Beat*. A motion to accept the minutes as printed was made by Bob KBØB, seconded by Rosie WAØMNL, and

accepted unanimously. Sid asked committee chairs to give a brief description of their committee activities for the benefit of new members. During the committee introductions, Mike KØTER mentioned the club assets inventory taking place November 12<sup>th</sup> at 1 PM. Jody KAØROZ, club historian, reported the club history book will reflect club activities and people from 1932 to 2000. Programs chairman Rick KØSU outlined the programs through Mar 2001, but noted that we need a program



for Feb and asked for any inputs. Swapfest Chairman Bob Ryals KIØGF mentioned the first meeting of the swapfest committee to be held December 2<sup>nd</sup> at the CSPD Falcon Substation on Goddard St. Technical Education chair Linda KBØRKW briefed the new Technician class starting January 9<sup>th</sup>. The classes will meet Tuesday and Thursday evenings at 7 pm at the Office of Emergency Management on S Union. The nine-week class is free and will use the 4<sup>th</sup> Ed of the ARRL book *Now You're Talking*. Pre-registration is requested by January 3<sup>rd</sup>, 2001, but not required. She noted that one student was traveling from Florida specifically to take the class from Frank McNally KFØWF! Ø-Beat Editor Rob N7LV will cheerfully accept articles from others, and Tom NØNTX, AMSAT Coordinator for Colorado, mentioned the Phase 3D launch scheduled for Nov 15<sup>th</sup>. Colorado Council of Amateur Radio Clubs (CCARC) Liaison, Moe WBØRTF, reported on the repeater frequency coordination the council does and Ron NKØP gave a brief treasurer's report for Oct 2000. The first item of old business was the Christmas party, to be held in lieu of a Dec meeting. The pot-luck party will be at the Springs City Church, 1250 Vondelpark Dr from 7 PM until ?. Turkey and ham (no pun intended) will be provided, but members are asked to bring a side dish and dessert. The club will be collecting canned food as part of the "Helping Hams" program. Orders for club jackets are being coordinated by Rob N7LV. The jackets are about \$35 pre-paid, and Rob will place the order around Feb 2001. New business began with the announcement of an appreciation dinner for Russ KBØFNM and Rosie WAØMNL. The dinner will be held Nov 18<sup>th</sup> from 5 to 6:30 pm at the Country Buffet, 7665 N Academy. Contact Rob N7LV or Ginger NØUOD. Wes KØHBZ announced a need for volunteers to help with dinner deliveries to the elderly on Thanksgiving and Christmas. Volunteers should contact Pat KØTSR. Mike WV7T announced a Veteran's Day special event station operating under the call sign KØUSN in memory of the USS Cole from his home. Mike will be operating on 146.52 MHz and 20 meters, and give out certificates to all who work him. The Hammy was presented to Rhoda KB2BZY for her work as club secretary last year. The meeting adjourned at 8:12 pm. The program was a roll-up J-pole construction project sponsored by Dick, K2LCT. *Submitted by Mike Allen, NØMIK, Secretary*

## Board Meeting Minutes

*[The Dec board meeting will be held at Sid K4ARM's QTH on Monday Dec 15. Pls RSVP 495-4147.]*

The Nov 16<sup>th</sup> 2000 PPRAA board meeting was held at Ron NKØP's home and called to order by President Sid White K4ARM at 7:00 pm. Board members in attendance: Sid K4ARM, Rick KØSU, Ron NKØP, Mike NØMIK, Mike WV7T, Rhoda KB2BZY, Jerry ADØA, and Tom NØNTX. Absent: Rob N7LV. The Christmas party was discussed and board member assignments were made regarding food, set-up, door prizes and miscellaneous party items. A motion passed to reimburse Ron for the cost of Russ and Rosie's plaque. A disbursement of \$25 for a new address stamp and other administrative materials was

also approved. Ron NKØP passed around samples of plaques, cups, name badges, etc done by Bob Snowden NRØO's shop, and the board discussed making Bob NRØO the "official" provider of club name badges, etc. Ron NKØP offered to be the focal point for any orders, with the first order being name tags for board members who will wear them at the next meeting. General members wanting the same kind of tag can then order them. A motion to send \$62.50 to the state for our raffle license was unanimously approved. The raffle will be held the first Saturday in May in conjunction with the swapfest. Sid K4ARM will coordinate with Bob Ryals KIØGF regarding location of the swapfest. Mention was made that the new board members had been updated at the library. Jerry ADØA noted that Amateur Radio Newsletter membership was up to \$25. Ron NKØP will work with Rob N7LV to investigate membership. Rick KØSU mentioned the upcoming programs. Jan will be homebrew/show & tell night, Feb will be the club auction hosted by Ron NKØP with 10% of the proceeds going to the club, and Mar will be a talk by Walt Stinson WØCP, ARRL Rocky Mountain Division Director. Ideas for future programs were discussed. Tom NØNTX presented updates on the Phase 3-D launch on the 15<sup>th</sup>. Jerry ADØA presented information on the WARC 2003 meeting and key 40m issues. Ron NKØP will look into spending club funds to support the ARRL in their work to protect our frequencies. Mike WV7T will begin teaching classes at a church behind the Broadmoor in Jan 2001, with the first class covering soldering techniques. Mike WV7T will transfer club videos to Mike NØMIK, and e-mail an inventory of club items to Sid K4ARM. Sid noted that Kate Ellis KCØEGJ will perform an audit of club finances with Ron NKØP. The meeting adjourned at 9:10 PM. *Submitted by Mike Allen, NØMIK, Secretary*

## Treasurer's Report



**For the month of October 2000**, we had income of \$159.00 and expenses of \$144.60. These amounts reflect mostly renewals and Ø-Beat costs. PPRAA would like to thank the following members for their generous donations to our club: N7LV, KC7IWY. *73 de NKØP*

### If your membership expires in Dec, pay:

**Full: \$15 Family: \$18 Associate: \$12  
Senior: \$10 Sr Family: \$12  
to extend until Dec 2001**

**Payments received after Jan 1, 2001 must be prorated to end on December 31.**

## Pikes Peak Region Ham Event Calendar

December 2000 / January 2001 -- Please see Page 2 for Points of Contact						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7	8 MARC Christmas Party	9 PPRAA VE Test
10	11	12	13 NO PPRAA Mtg - Christmas Party on the 15th	14 Lunch Bunch	15 PPRAA Christmas Party	16
17 Fox Hunt	18 PPRAA Brd Mtg	19	20 MARC Mtg	21 RACES Mtg	22	23
24	25 Christmas	26 ZB Deadline	27	28	29	30
31	1 New Years Day	2	3	4	5	6 MARC VE Test
7	8	9 Ham Class	10 PPRAA Mtg	11 Lunch Bunch Ham Class	12	13
14	15 PPRAA Brd Mtg	16 Ham Class	17 MARC Mtg	18 RACES Mtg Ham Class	19	20
21	22	23 Ham Class	24	25 Ham Class	26	27
28	29 ZB Deadline	30 Ham Class	31			

<b>Membership Application for the Pikes Peak Radio Amateur Association, Inc.</b> P.O. Box 16521, Colorado Springs, CO 80935-6521			
Date: _____	<input type="checkbox"/> New Member	<input type="checkbox"/> Renewal	In which activities would you like to participate?
Name: _____	Field Day <span style="float: right;">⇒ <input type="checkbox"/></span> Demonstrations <span style="float: right;">⇒ <input type="checkbox"/></span> Nets or round tables <span style="float: right;">⇒ <input type="checkbox"/></span> Organize activities <span style="float: right;">⇒ <input type="checkbox"/></span> Teach ham classes <span style="float: right;">⇒ <input type="checkbox"/></span>		
Address: _____			
City: _____ State: _____ Zip: _____			
Call: _____ Class: N T + G A E	Phone: _____	Full Member *: ⇒ <input type="checkbox"/> Family Membership *: ⇒ <input type="checkbox"/> Over 65 *: ⇒ <input type="checkbox"/> Over 65 Family *: ⇒ <input type="checkbox"/> Associate *: ⇒ <input type="checkbox"/> Ø-Beat Only *: ⇒ <input type="checkbox"/> ARRL Dues Incl'd \$34: ⇒ <input type="checkbox"/> Donation to Club: _____	
Mbr of ARRL? <input type="checkbox"/> Yes <input type="checkbox"/> No	E-mail: _____		
Additional Family Members to Join/Renew:			
Name: _____	Call: _____	Class: _____	ARRL? _____
Name: _____	Call: _____	Class: _____	ARRL? _____
Name: _____	Call: _____	Class: _____	ARRL? _____
<b>Would you like to receive Ø-Beat electronically via e-mail in PDF format <u>instead</u> of a printed copy?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No			
Circle your interests ⇒ HF / V/UHF / FM / SSB / Digital / DX / Contests / Technical / Hardware / Other _____			
<b>Renew your ARRL membership through the PPRAA!</b> Send your ARRL renewal form and your check for the amount due to the ARRL to the PPRAA. Make the check payable to the PPRAA. The PPRAA will forward your renewal form to the ARRL. The PPRAA keeps \$2 as a donation or commission, and pays the difference to the ARRL.			
New and renewing members must submit a completed application form along with your check to the Treasurer. <b>Please Type or Print Clearly!</b>			

\* Due to a transitional period in the dues structure, see Treasurer's column for amount if you're renewing !!  
 (If you don't want to cut up your Ø-Beat you can get an app off of the club's web site.)



## RadioActivities!

### Lunch Bunch

The next **Lunch Bunch** is Dec 14 at Country Buffet North (next to Best Buy), 1130-1300. Bring a gift valued at \$5 or less; mark "For Men", "For Women", or "For Both".  
(Always the Thursday following the club meeting.)  
Contact Ginger Hipszky NØUOD for further details. See you there!

### Dits & Bits

- **Free:** Laser 128 computer (Apple IIC clone), color monitor, color printer, extra external drive. Lots of educational software. Rick KØSU 531-9423 (early evenings), or e mail: **k0su@arrl.net**

### Other Local Clubs

- **PPFMA .97 autopatch moved:** The .97 patch is again in working order; the .265 is still off-line. For the latest information, check in to the PPFMA Net on Sunday nights at 2100 on the 146.97 / 448.45 repeaters. Mike Stansberry KØTER has been appointed Technical Chairman for the PPFMA.

### Ham Classes Coming in January

Frank McNally KFØWF, award-winning ARRL Instructor of the Year, will again be teaching classes beginning in January. Details are inside this issue of the *Ø-Beat*!

### Hamfests

- **Jan 27:** Albuquerque Winter Tailgate Hamfest, Albuquerque, NM. Contact Tom Ellis K5TEE, 505-291-8122, **k5tee@arrl.net**.
- **Feb 18:** Aurora Repeater Assn Hamfest, Adams Co. Fairgrounds, Brighton. Contact Wayne Heinen, NØPOH, 303-699-6335, **n0poh@arrl.net**.

### Club Auction

Clean out your shack! PPRAA will hold an auction for your unwanted gear at the February general meeting. Ten percent of all proceeds will go to the club. Watch for details in the January *Ø-Beat*. *de NKØP*

### Official PPRAA Club Badges

PPRAA board authorizes 'Official' name badges. **Plaque World** owner and operator **Bob Snowden NRØO** has agreed to supply PPRAA with name badges, plaques, coffee cups, license plate frames and a variety of other items at discounted prices. Officers and board members will sport the new badges at our Christmas Party December 15th. Orders and pricing will be available at the January General membership meeting. Prepayment required. Watch for more details in the January *Ø-Beat*. *de NKØP*



**Pikes Peak Radio Amateur Association, Inc.**  
**P.O. Box 16521**  
**Colorado Springs, CO 80935-6521 USA**

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